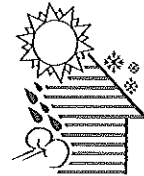


Work Order Bid (ID)

CAC Housing Energy Services



CAC Housing &
Energy Services

WORK ORDER INFORMATION

Work Order Name: WO/80008KN1810/1

Work Order Type: Weatherization

Audit Name: 80008KN1810-audit

CLIENT INFORMATION

Client ID: 80008KN1810

AGENCY INFORMATION

Agency: Knoxville- Knox County Community Action Agency

Agency Phone: (865) 244-3080

Address: (PO Box 51650) 2247 Western Avenue
Knoxville, TN 37950-1650

Fax: (865) 544-1647

Email Address:

Agency Contact: Neely, Richard

Work Phone: (865) 244-3080

Cell Phone:

Email Address: richard.neely@cachousing.org

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

Single Family Dwelling

Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable.

City-House age is 1920

RRP Certified Firm/Renovator Required

Measures

Measure 1	New Duct System	Components	Inspected
Comment	<p>Includes complete duct system. Must perform an ACCA Manual D and submit with invoice. Must meet local codes. Duct to be installed with straightest and shortest route must be secured with straps to alleviate sagging, all joints to be sealed with liquid mastic. Must have a minimum of R-8 insulation around it. Tape with appropriate UL 181 tape. Liquid white Mastic to be applied to entire inside of boot to seal all seams. Top of boot where it meets subfloor to be taped with UL 181 Mastic tape. Boots to be insulated on outside of boot to R-8. This is best performed with 2-part close cell foam. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.</p> <p>Refer to Attachment A-Standards for Weatherization Materials and Southeast Field Guide.</p>		<input type="checkbox"/>

NOTE: This is to replace existing duct system that is rotten.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Construction Mate	New Duct System	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Refer to Attachment A- Standards for Weatherization Materials and Southeast Field Guide.							

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:

Sub Total:

Field Notes:

Comment Energy Measures

Air Sealing Measures

Reduce air infiltration with 23 air seals. Each air seal is equal to 100 cfms. It is the responsibility of the contractor to find the air leaks. This is best performed with a Blower Door. Contractor must meet or exceed the targeted #. A house must not be brought below 1500 cfm @ 50 pascals. No CHANGE ORDER for air seals below the targeted #.

"Open" Ring, Front Door, Pre 5817 CFM @ 50 pascals. Target is 3517 CFM @ 50 PA

broken panes w1,w2,w6,w7,s3,

Refer to Appendix A- Standards for

Weatherization Materials and Tennessee Weatherization Field Guide.

Weatherstrip d1,d2

Remove old weatherstripping before installing new weatherstripping.

Weatherstrips must be one solid

piece. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.

Door sweep d1

Remove old door sweep before installing new door sweep. Door Sweep must be one solid piece. Refer

to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

NOTE: Rubber Door Bottom for Prehung Metal Door.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Miscellaneous Su	weatherstrip	Each	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	labor	Each	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Miscellaneous Su	sweep	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Miscellaneous Su	broken pane	Each	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Labor	labor	Each	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

Measure Sub Total:**Sub Total:****Field Notes:**

--

Measure 3 DWH Pipe Insulation**Components****Inspected**

Comment Includes labor cost. Insulate the first 6 feet of hot and cold water pipe from water heater. Use pipe wrap with a R-value of at least 2. Cover elbows, unions, and other fittings to the same thickness as pipe. All corners must be Cut properly. Keep pipe insulation 6 inches away from single wall vent pipe and 1 inch away from Type B vent.
Interior diameter of pipe sleeve must match exterior diameter of pipe. Fasten with zip ties, tape, or other

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	DHW Pipe Insulation	Each	1					
2	Labor	DHW Pipe Insulation	Each	1					

Other Detail

Measure Sub Total:**Sub Total:****Field Notes:**

--

Measure 4 DWH Tank Insulation**Components****Inspected****Comment**☐

Water heaters should be re-insulated to at least R-10 with an external insulation blanket unless water heater label gives specific instructions not to insulate or the water heater is already insulated. Keep insulation at least 2 inches away from gas valve and burner access panel. Don't install insulation below the burner access panel. Flammable Vapor Ignition Resistant models have combustion intake vents that must be left open. Follow the manufacturer's instructions when installing insulation blankets on (FVIR) water heaters so to not damage unit. Don't cover the pressure relief valve and discharge pipe with insulation. Don't insulate the tops of gas fired water heaters to avoid obstructing draft diverter. Mark the blanket to locate the thermostat and heating element access plates or cut the blanket at these locations. When you cut the blanket, cut the bottom and the sides but not the top. This creates a flap that remains closed in place. Don't cover the pressure relief valve and discharge line. Cover the top of the water heater with insulation if it doesn't obstruct the pressure relief valve. Install three zip tie straps (1st 6" from the top 2nd in the Middle, 3rd- 6" from Bottom).

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Hot Water Equipm	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 5 Lighting Retrofits**Components** I1,I2,I3,I4,I5,I6,I7,I8**Inspected****Comment** Lighting

Replace incandescent light bulb with compact fluorescent bulb equal to the incandescent. Inform customers about proper recycling of fluorescent bulbs by stores, municipal waste departments, or other recycling organizations. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Lighting	Compact Fl. - 7 Watt	Each Lamp	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Compact Fl. - 7 Watt	Each Lamp	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Lighting	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	Labor	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	Lighting	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	Labor	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	Lighting	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8	Labor	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9	Lighting	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
10	Labor	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
11	Lighting	Compact Fl. - 7 Watt	Each Lamp	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12	Labor	Compact Fl. - 7 Watt	Each Lamp	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
13	Lighting	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14	Labor	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15	Lighting	Compact Fl. - 18 Watt	Each Lamp	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
16	Labor	Compact Fl. - 18 Watt	Each Lamp	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

Measure Sub Total:**Sub Total:****Field Notes:**

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Measure 6 Replace Htg. System**Components h1****Inspected****Comment** Install 2 Ton 80% Natural Gas Furnace with Venting.
☐

Includes labor cost. Must be installed by a licensed mechanical contractor. Must perform an ACCA Manual J and submit with invoice. Must be equal to Amana or Goodman 13 Seer .Size is approximately 2 ton. Final size will be determined by the Director of Housing. If size on ACCA Manual J is different from this write up, contact CAC before install for approval.

Contractor to provide client with all warranty information on unit at inspection.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Heating Equipmen	Replacement Furnace (not used) - 112 kBtu/h NG Existing, 27 - 38 kBtu/h NG Post	Each	1					
2	Labor	Labor	Each	1					

Other Detail

Measure Sub Total:**Sub Total:****Field Notes:**

--

Measure 7 Replace A/C**Components** ac1**Inspected****Comment** HVAC☐

Includes labor cost. Must be installed by a licensed mechanical contractor. Must perform an ACCA Manual J and submit with invoice. Must be equal to Amana or Goodman 13 . Size is approximately 2 ton. Final size will be determined by the Director of Housing. If size on ACCA Manual J is different from this write up, contact CAC before install for approval.

Note: Contractor to provide thermostat to client and educate client on operation. Contractor to provide client warranty information on unit and thermostat at inspection.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Cooling Equipmen	Central A/C -	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Central A/C -	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total:						<input type="text"/>	Sub Total:	<input type="text"/>	

Field Notes:

Measure 8 Furnace Tuneup**Components****Inspected**

Comment DO NOT BID MEASURE
DO NOT BID MEASURE
DO NOT BID MEASURE
DO NOT BID MEASURE

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Heating Equipmen	Furnace Tuneup	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Furnace Tuneup	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Comment

☐

Floor Insulation

Includes labor cost. Contractor's responsibility to seal penetration in floor before installing insulation. Contractor to install using Resnet Grade 1 Standards. Insulation faced or unfaced is installed to maintain permanent contact with the subfloor above (paper side against subfloor) including necessary supports (e.g. staves for blankets). Insulation to have NO gaps, voids, or compressions. ✓ Install R19 insulation between floor joists. ✓ Insulation should be installed snugly against the floor and without voids or gaps. ✓ Insulation should fit snugly around cross bracing and other obstructions. ✓ securely fasten batt insulation to framing with insulation hangers, plastic mesh, or other supporting material. Insulation should contact subfloor to prevent convecting air above the insulation from reducing its R-value. ✓ Faced insulation should be installed with the foil or kraft facing placed up towards the floor sheathing. The batt should fill the whole cavity If insulation is supported by lath or plastic twine underneath. For batts that do not feel the whole cavity, use wire insulation supports. It is important that ground moisture barrier is properly installed in the crawlspace to protect the insulation and ensure proper R-value is achieved. Floor insulation should fit tightly against the rim joist. ✓ If balloon framed, air seal stud cavities prior to installing floor insulation. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

- The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.
- For wall insulation a certificate should be secured on a wall in the attic if possible.
- A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.
- For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.
- For loose-fill insulation, the certificate must be dated and signed by the

Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

•Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

•For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1634	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1634	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:

Sub Total:

Field Notes:

**Comment** Attic Insulation

Includes labor cost. Contractor to install 1 ruler for every 300 square foot of attic space showing depth of insulation. Insulation should cover the entire area intended for insulation without voids or edge gaps. Blown insulation should be installed at sufficient density to resist settling, according to manufacturer's instructions. Loose fiberglass is blown in attics from 0.5 to 0.9 pcf and at that density the R-value is around 3.2 per inch. Loose cellulose is blown in attics from 0.6 to 1.2 pcf and at that density range, the R-value is around 3.7 per inch. Insulation should be protected from air migrating around and through it by an effective air barrier. Air sealing attics must precede attic insulation and this may require removing existing insulation and debris that currently prevent effective air sealing. Box around recessed light fixtures and exhaust fans to prevent overheating and/or fire. Install collars or dams around masonry chimneys, B-vent chimneys, and manufactured chimneys after sealing the air leaks around them. ✓ If rolled metal is used as a barrier around heat-producing devices or chimneys, it must be fastened securely to the ceiling joist so the barrier won't collapse. Barriers should extend at least 4 inches above the insulation and be secured to keep insulation a minimum of 3 inches away from the heat-producing device. ✓ All-fuel wood-stove chimneys should have ventilated insulation shields. Covering recessed light fixtures: Covering recessed light fixtures with fire-resistant drywall or sheet-metal enclosures reduces air leakage and allows insulation to be blown around the box. ✓ If you plan to cover an electrical junction box with insulation, mark its location with a sign, flag, or other marker.

Install baffles in every joist or truss bay to ensure no insulation enters the soffit area. Seal holes, gaps, and penetrations in attic before insulating. Seal around chimney with sheet metal and high temperature silicone or fire resistant foam. Install R-30 fiberglass batt secured to attic access and weather strip with foam tape. Contractor to install using Resnet Grade 1 Standards. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

- The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.
- For wall insulation a certificate should be secured on a wall in the attic if possible.

- A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.
- For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.
- For loose-fill insulation, the certificate must be dated and signed by the Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.
- Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.
- For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

Cut in the ceiling an attic access door 22" x 30". If unable to achieve, then opening must be equal to 660 square inches 22" x 30". An attic access door is installed as a complete unit. A door is inclusive of foam seal, trim, paint (1st quality semi gloss color to be chosen by homeowner, caulk, and R-30 Batt insulation. Build an insulation dam around the attic access hatch. Insulate the hatch to R-30 value. Build the dam with rigid materials like plywood or oriented strand board so the dam supports the weight of the person entering

or leaving the attic. Weatherstrip the attic access to air seal the access and provide uninterrupted air barrier between the attic and conditioned space. It is the best practice to seal hatches in the unconditioned space such as carports and attached garages and stairwells. All attic hatches must have a locking device that securely hold the access in place and slightly compresses the weatherstripping.. Do not cut the framing member to install a hatch without approval from a local agency, a structural engineer, and local codes enforcement if applicable. The dam's purpose is to prevent loose-fill insulation from falling out of the attic hatch when opened. Install latches, sash locks, gate hooks or other positive closure to provide substantially airtight hatch closure. No changes allowed . Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Attic Insulation - Fiberglass, Blown - R-30	SqFt	1634					
1	Labor	Attic Insulation - Fiberglass, Blown - R-30	SqFt	1634					
2	Labor	labor	Each	1					
2	Miscellaneous Su	attic access	Each	1					
3	Miscellaneous Su	baffles	Each	75					
3	Labor	labor	Each	75					
Other Detail									
Measure Sub Total:							Sub Total:		

Field Notes:

Measure 11 CO Monitor is Needed**Components****Inspected**

Comment Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

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#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	CO monitor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:****Measure 12 Fix Any Other Venting Related Problem (Water Heater)****Components****Inspected**

Comment Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable. Install B-Vent pipe to have 1/4 inch rise per foot. Existing venting is made of wrong material and not correct slope.

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Replace B-Vent Water Heater (up to 10 feet)	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 13 Fix Improper Venting Kitchen Exhaust Fan

Components

Inspected

Comment

☐

Range Vents (not to exceed 15') installed to outside of home with appropriate roof fittings, sidewall fittings, or soffit fittings. Use rigid galvanized steel, stainless steel, or copper vent pipe for kitchen exhaust vent pipe. Insulate the vent pipe with R-8 to prevent condensation. Bathroom vent pipe must be securely fastened and sealed to prevent movement. Avoid using flexible plastic or aluminum duct because these restrict airflow. Insulate the vent pipe to R-8 to prevent condensation. No changes allowed. Refer to Appendix A Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Range Vent w/ Metal Piping	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:

Sub Total:

Field Notes:

Measure 14 Fix Improper Venting of Bathroom Exhaust Fan

Components

Inspected

Comment

☐

Bath Vents installed to outside of home with appropriate roof fittings, sidewall fittings, or soffit fittings, Use rigid galvanized steel, stainless steel, or copper vent pipe for bath exhaust vent pipe. Insulate the vent pipe with R-8 to prevent condensation. Bathroom vent pipe must be securely fastened and sealed to prevent movement. Avoid using flexible plastic or aluminum duct because these restrict airflow. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Bath Vent w/ Piping to Outside	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total:						<input type="text"/>	Sub Total:	<input type="text"/>	

Field Notes:

Measure 15 Install Bathroom Exhaust Fan**Components****Inspected****Comment**☐

Bath Exhaust fan equal to Nutone Model # 769RFT. Must be energy star or Title 24 compliant. Must have weatherproof termination fitting, a Back draft damper installed at the fan housing or termination fitting have a efficacy of 2.8 and a low noise rating depending on the CFM output of the fan installed To include All electrical.
Refer to Attachment A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Bathroom exhaust fan	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

A water heater must have a pressure-and-temperature relief valve and a safety discharge pipe. Install a relief valve and discharge pipe if none exists. The discharge pipe should terminate 6 inches above the floor or outside the dwelling as specified by local codes. The discharge pipe should be made of rigid metal pipe or approved high temperature plastic pipe.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Pressure relief piping	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

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<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total: <input type="text"/>	Sub Total: <input type="text"/>
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Field Notes:

Measure 17 Vapor Barrier Needed 925 sq ft**Components****Inspected****Comment**☐

Must be 6 mil poly. Must be installed 100% of crawlspace installed without voids or gaps with 6" turned up all foundation walls and interior support piers and must be securely fastened with polyurethane adhesive or acoustical sealant and (wood furring strips) . Must be secured at all seams. Overlap at least 12" at all joints. Seal the seams in the moisture barrier with construction tape or acoustical sealant making it a air moisture barrier. Keep plastic at least 3" away from any wood construction material. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

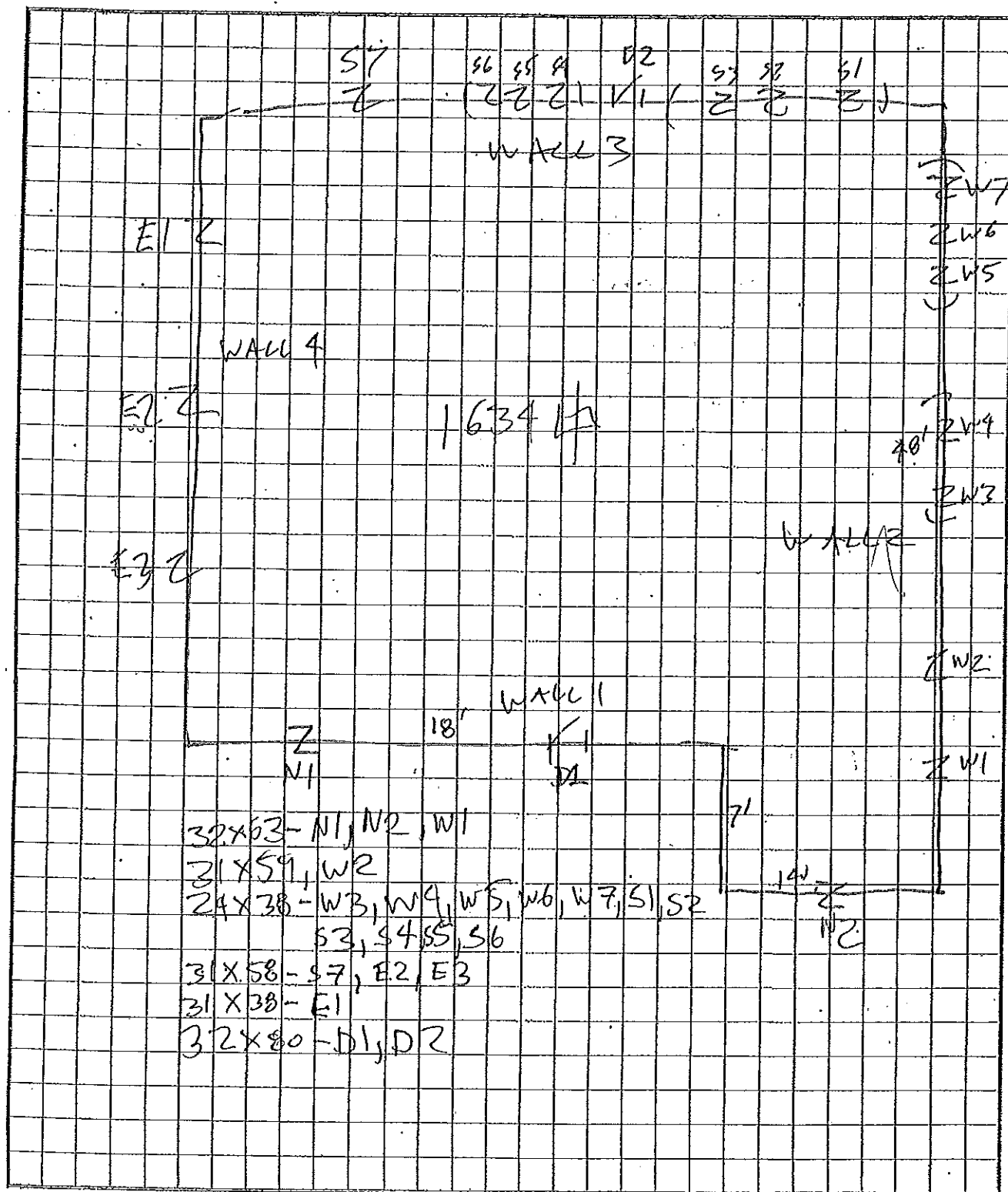
#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Basement / Crawlspace Vapor Barrier	SqFt	925	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	SqFt	925	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:****Work Order Grand Total:****Grand Total:**

Site Diagram



Client Name: _____
Client ID: _____
Alt. Client ID: _____

NEAT Data Collection Form
Form Run On: 11/23/2009

DOE Weatherization Assistant
Version 8.6.0
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